

## CLAIMS

Claim 1. A method of modifying hydraulic circuitry of an automotive transmission including a torque converter control valve movable within a valve bore between a first predetermined lower position and a second predetermined upper position by the selective application of fluid beneath said torque converter control valve; said hydraulic circuitry including a valve opposing upward movement of said torque converter control valve between said first and second predetermined positions; the steps of said method comprising:

removing said valve opposing said upward movement of said torque converter control valve.

Claim 2. The method as claimed in Claim 1, wherein said hydraulic circuitry includes a return spring opposing upward movement of said torque converter control valve between said first and second predetermined positions, the steps of said method comprising:

removing said return spring opposing upward movement of said torque converter control valve; and

replacing said return spring with another return spring having a greater coefficient of tension.

Claim 3. The method as claimed in Claim 1, wherein said torque converter control valve includes upper and lower lands of different diameters, the steps of said method comprising:

replacing said torque converter control valve with another torque converter control valve having upper and lower lands of substantially equal diameter.

Claim 4. The method as claimed in Claim 1, wherein said hydraulic circuitry includes an exhaust having an opening of a predetermined diameter in fluid flow relationship with said valve bore; the steps of said method comprising:

modifying said exhaust to restrict fluid flow through said opening of said exhaust.

Claim 5. The method as claim in Claim 4, wherein the step of modifying said exhaust to restrict fluid flow through said opening of exhaust comprises the steps of:

replacing said valve bore with a replacement valve bore, and

defining an opening in said replacement valve bore, said opening having a diameter smaller than said predetermined diameter of said opening of said exhaust, said opening in said replacement bore being, at least in part, in axial alignment with

said opening of said exhaust to restrict fluid flow through said exhaust.

Claim 6. The method as claim in Claim 5, said method comprising the steps of:

modifying the size of said opening defined in said replacement bore for adjusting the flow of fluid through said opening of said exhaust.

Claim 7. A method of modifying hydraulic circuitry of a 4R100 automotive transmission including a torque converter control valve movable within a valve bore between a first predetermined lower position and a second predetermined upper position by the selective application of fluid beneath said torque converter control valve; said hydraulic circuitry including a valve opposing upward movement of said torque converter control valve between said first and second predetermined positions; the steps of said method comprising:

removing said valve opposing said upward movement of said torque converter control valve.

Claim 8. The method as claimed in Claim 7, wherein said hydraulic circuitry includes a return spring opposing upward movement of said torque converter control valve between said

first and second predetermined positions, the steps of said method comprising:

removing said return spring opposing upward movement of said torque converter control valve; and

replacing said return spring with another return spring having a greater coefficient of tension.

Claim 9. The method as claimed in Claim 7, wherein said torque converter control valve includes upper and lower lands of different diameters, the steps of said method comprising:

replacing said torque converter control valve with another torque converter control valve having upper and lower lands of substantially equal diameter.

Claim 10. The method as claimed in Claim 7, wherein said hydraulic circuitry includes an exhaust having an opening of a predetermined diameter in fluid flow relationship with said valve bore; the steps of said method comprising:

modifying said exhaust to restrict fluid flow through said opening of said exhaust.

Claim 11. The method as claim in Claim 10, wherein the step of modifying said exhaust to restrict fluid flow through said opening of said exhaust comprises the steps of:

replacing said valve bore with a replacement valve bore, and

defining an opening in said replacement valve bore, said opening having a diameter smaller than said predetermined diameter of said opening of said exhaust, said opening in said replacement bore being, at least in part, in axial alignment with said opening of said exhaust to restrict fluid flow through said exhaust.

Claim 12. The method as claim in Claim 11, said method comprising the steps of:

modifying the size of said opening defined in said replacement bore for adjusting the flow of fluid through said opening of said exhaust.

Claim 13. A method of modifying the hydraulic circuitry of an automotive transmission having a torque converter control valve movable in a valve bore between a first predetermined lower position and a second predetermined upper position by the selective application of fluid beneath said torque converter control valve, said hydraulic circuitry including a return spring

opposing upward movement of said torque converter control valve;  
the steps of said method comprising:

removing said return spring opposing upward movement of said torque converter control valve; and

replacing said return spring with another return spring having a greater coefficient of tension.

Claim 14. A method of modifying the hydraulic circuitry of a 4R100 automotive transmission having a torque converter control valve movable in a valve bore between a first predetermined lower position and a second predetermined upper position by the selective application of fluid beneath said torque converter control valve, said hydraulic circuitry including a return spring opposing upward movement of said torque converter control valve; the steps of said method comprising:

removing said return spring opposing upward movement of said torque converter control valve; and

replacing said return spring with another return spring having a greater coefficient of tension.

Claim 15. A method of modifying the hydraulic circuitry of an automotive transmission having a torque converter control valve movable in a valve bore between a first lower predetermined

position and a second upper predetermined position by the selective application of fluid beneath said torque converter control valve, said torque converter control valve having upper and lower lands of differing diameter; the steps of said method comprising:

replacing said torque converter control valve with a replacement torque converter control valve having upper and lower lands of substantially equal diameter.

Claim 16. A method of modifying the hydraulic circuitry of a 4R100 automotive transmission having a torque converter control valve movable in a valve bore between a first lower predetermined position and a second upper predetermined position by the selective application of fluid beneath said torque converter control valve, said torque converter control valve having upper and lower lands of differing diameter; the steps of said method comprising:

replacing said torque converter control valve with a replacement torque converter control valve having upper and lower lands of substantially equal diameter.

Claim 17. A method of modifying the hydraulic circuitry of an automotive transmission having a valve movable in a valve bore between a first predetermined lower position and a second predetermined upper position by the selective application of

fluid beneath said valve, and an exhaust having an opening of a predetermined diameter coupled in fluid flow relationship with said valve bore; the steps of said method comprising:

replacing said valve bore with a replacement valve bore having an opening defined therein; said opening being of a smaller diameter than said predetermined diameter of said opening of said exhaust; at least a portion of said smaller opening in said replacement valve bore being in axial alignment with said opening of said exhaust to restrict the flow of fluid between said valve bore and said exhaust.

Claim 18. The method as claimed in Claim 17, the steps of said method comprising:

modifying the size of said opening in said replacement valve bore to adjust the fluid flow between said valve bore and said exhaust.

Claim 19. A method of modifying the hydraulic circuitry of a 4R100 automotive transmission having a torque converter control valve movable in a valve bore between a first predetermined lower position and a second predetermined upper position by the selective application of fluid beneath said torque converter control valve, and an exhaust having an opening of a predetermined diameter coupled in fluid flow relationship with said valve bore; the steps of said method comprising:



replacing said valve bore with a replacement valve bore having an opening defined therein; said opening being of a smaller diameter than said predetermined diameter of said opening of said exhaust; at least a portion of said smaller opening in said replacement valve bore being in axial alignment with said opening of said exhaust to restrict the flow of fluid between said valve bore and said exhaust.

Claim 20. The method as claimed in Claim 19, the steps of said method comprising:

modifying the size of said opening in said replacement valve bore to adjust the fluid flow between said valve bore and said exhaust.